

**JAN 08 2002**

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(use as many sheets as necessary)*

Sheet

1

of

1

Application Number

**Complete if Known**

**09/857,581**

Filing Date

June 5, 2001

First Named Inventor

Gary M. Fader et al.

**Group Art Unit**

Unknown

**Examiner Name**

**Unknown**

Attorney Docket Number

BB1339 US PCT

**U.S. PATENT DOCUMENTS**

[illegible]

## FOREIGN PATENT DOCUMENTS

[illegible]

**Examiner  
Signature**

Date Considered

$$5 \overline{) 24103}$$

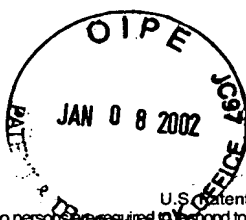
**EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

**Burden Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231**



Please type a plus sign (+) inside this box → ☐



PTO/SB/08B(08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE  
Respond to a collection of information unless it contains a valid OMB control number

Under the Paperwork Reduction Act of 1995, no person shall be required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 5

### Complete if Known

Application Number	09/857,581
Filing Date	June 5, 2001
First Named Inventor	Gary M. Fader et al.
Group Art Unit	Unknown 1652
Examiner Name	Unknown RAMIREZ
Attorney Docket Number	BB1339 US PCT

### OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
JR		EMBL SEQUENCE LIBRARY DATA ACCESSION NO: AF022462, 01/08/1998, B. SIMINSKY ET AL., Expression of a Soybean Cytochrome P450 Monooxygenase cDNA tobacco enhances the metabolism of phenylurea herbicides	
JR		C. R. SCHOPFER ET AL., Mol. Gen. Genet., vol. 258:315-322, 1998, Identification of elicitor-induced cytochrome P450s of soybean (Glycine max L.) using differential display of mRNA	
JR		TOMOYOSHI AKASHI ET AL., Plant Science, vol. 126:39-47, 1997, Cloning of cytochrome P450 cDNAs from cultured Glycyrrhiza echinata L. cells and their transcriptional activation by elicitor-treatment	
JR		TAKASHI HAKAMATSUKA ET AL., Chem. Pharm. Bull., vol. 37(1):249-252, 1989, Isoflavone synthase from cell suspension cultures of Pueraria Lobata	
JR		S. P. COLLIVER ET AL., Plant Mol. Biol., vol. 35:509-522, 1997, Differential modification of flavonoid and isoflavonoid biosynthesis with an antisense chalcone synthase construct in transgenic Lotus corniculatus	
JR		CHRISTOPHER L. STEELE ET AL., Arch. of Biochem. & Biophys., vol. 367(1):146-150, 1999, Molecular characterization of the enzyme catalyzing the aryl migration reaction of Isoflavonoid Biosynthesis in Soybean	
JR		TOMOYOSHI AKASHI ET AL., Plant Phys., vol. 121:821-828, 1999, Cloning and functional expression of a cytochrome P450 cDNA encoding 2-Hydroxyisoflavone Synthase involved in biosynthesis of the isoflavonoid skeleton in licorice	
JR		DONALD A. PHILLIPS, Phenolic Metabolism in Plants, edited y H.A. Stafford et al., 1992, pgs. 201-231, Flavonoids: Plant signals to soil microbes	
JR		MICHAEL NAIM ET AL., J. Agric. Food Chem., vol. 24(6):1174-1177, 1976, Antioxidative and Antihemolytic activities of soybean isoflavones	
JR		MICHAEL NAIM ET AL., J. Agric. Food Chem., vol. 22(5):806-810, 1974, Soybean isoflavones, characterization, determination, and antifungal activity	
JR		K. R. PRICE ET AL., Food Add. & Cont., vol. 2(2):73-106, 1985, Naturally occurring oestrogens in foods - A review	

Examiner Signature

*[Signature]*

Date Considered

5/24/03

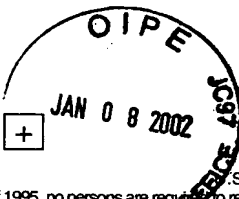
\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Please type a plus sign (+) inside this box →



PTO/SB/08B(08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 5

### Complete if Known

Application Number	09/857,581
Filing Date	June 5, 2001
First Named Inventor	Gary M. Fader et al.
Group Art Unit	Unknown 1652
Examiner Name	Unknown RAMIREZ
Attorney Docket Number	BB1339 US PCT

### OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
DR		MARK MESSINA ET AL., J. Natl. Cancer Inst., vol. 83(8):541-545, The role of soy products in reducing risk of cancer	
		GREG PETERSON ET AL., Biochem. and Biophys. Res. Comm., vol. 179(1):661-667, 1991, Genistein inhibition of the growth of human breast cancer cells: Independence from estrogen receptors and the multi-drug resistance gene	
		K. S. MATHUR ET AL., J. Nutrition, vol. 84:201-204, 1964, Effect of bengal gram on experimentally induced high levels of cholesterol in tissues and serum in albino rats	
		R. D. SHARMA, Lipids, vol. 14(6):535-540, Isoflavones and hypercholesterolemia in rats	
		CHIGEN TSUKAMOTO ET AL., J. Agric. Food Chem., vol. 43:1184-1192, 1995, Factors affecting isoflavone content in soybean seeds: Changes in isoflavones, saponins, and Composition of fatty acids at different temperatures during seed development	
		HUEI-JU WANG ET AL., J. Agric. Food Chem., vol. 42:1674-1677, 1994, Isoflavone composition of American and Japanese soybeans in Iowa: Effects of variety, crop year, and location	
		RICHARD A. DIXON ET AL., Plant Cell, vol. 7:1085-1097, 1995, Stress-Induced Phenylpropanoid Metabolism	
		J. ROWELL M. POTTS ET AL., J. of Biol. Chem., vol. 249(16):5019-5026, 1974, The 4-Hydroxylation of cinnamic acid by Sorghum Microsomes and the requirement for cytochrome P450	
		TOMOYOSHI AKASHI ET AL., Biochem. & Biophys. Res. Comm., vol. 251:67-70, 1998, CYP81E1, a cytochrome P450 cDNA of licorice (Glycyrrhiza echinata L.), encodes Isoflavone 2'-Hydroxylase	
		CHRISTEL R. SCHOPFER ET AL., FEBS Lett., vol. 432:182-186, 1998, Molecular characterization and functional expression of dihydroxypterocarpan 6a-hydroxylase, an enzyme specific for pterocarpanoid phytoalexin biosynthesis in soybean (glycine max. L.)	
DR		M. HAGMANN ET AL., FEBS, vol. 175(2):199-202, 1984, Enzymatic rearrangement of flavonone to isoflavone	

Examiner Signature

*[Signature]*

Date Considered

5/24/03

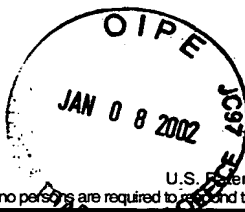
\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Please type a plus sign (+) inside this box → ☐



PTO/SB/08B(08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 3 of 5

Complete if Known

Application Number	09/857,581
Filing Date	June 5, 2001
First Named Inventor	Gary M. Fader et al.
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	BB1339 US PCT

RECEIVED  
JAN 16 2002  
FBI/DOJ  
JAN 16 2002

### OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
DR		GEORG KOCHS ET AL., Eur. J. Biochem., vol. 155:311-318, 1986, Enzymic synthesis of isoflavones	
↑		CLINT CHAPPLE, Annu. Rev. Plant Physiol. Plant Mol. Biol., vol. 49:311-343, 1998, Molecular-Genetic analysis of plant cytochrome P450-dependent monooxygenases	
		ERICH GROTEWOLD ET AL., Plant Cell, vol. 10:721-740, 1998, Engineering secondary metabolism in maize cells by ectopic expression on transcription factors	
		ROBERT W. M. SABLowski ET AL., EMBO J., vol. 13(1):128-137, 1994, A flower-specific Myb protein activates transcription of phenylpropanoid biosynthetic genes	
		MARK D. ADAMS ET AL., Science, vol. 252:1651-1656, 1991, Complementary DNA Sequencing: Expressed sequence tags and human genome project	
		STEPHEN F. ALTSCHUL ET AL., J. Mol. Biol., vol. 215:403-410, 1990, Basic Local Alignment Search Tool	
		WARREN GISH ET AL., Nature genetics, vol. 3:266-272, 1993, Identification of protein coding regions by database similarity search	
		NATIONAL CENTER FOR BIOTECHNOLOGY INFORMATION GENERAL IDENTIFIER NO. 2739005, 03-02-1999, B. SIMINSZKY ET AL., Expression of a soybean cytochrome P450 monooxygenase cDNA in yeast and tobacco enhances the metabolism of phenylurea herbicides	
		BALAZS SIMINSZKY ET AL., PNAS, vol. 96:1750-1755, 1999, Expression of a soybean cytochrome P450 monooxygenase cDNA in yeast and tobacco enhances the metabolism of phenylurea herbicides	
↓		MUHAMMED FAISAL HASHIM ET AL., FEBS Lett., vol. 271(1,2):219-222, 1990, Reaction mechanism of oxidative rearrangement of flavanone in isoflavone biosynthesis	
DR		NATIONAL CENTER FOR BIOTECHNOLOGY INFORMATION GENERAL IDENTIFICATION NO. 1359894, 10-07-1996, M. HASENFRATZ ET AL., Multiple forms of NADPH-cytochrome P450 reductase in higher plants	

Examiner  
Signature

*[Signature]*

Date  
Considered

5/24/03

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Please type a plus sign (+) inside this box → +



Approved for use through 10/31/2002. OMB 0634-0031  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 4 of 5

Complete if known

Application Number	09/857,581
Filing Date	June 5, 2001
First Named Inventor	Gary M. Fader et al.
Group Art Unit	Unknown 1652
Examiner Name	Unknown RAMIREZ
Attorney Docket Number	BB1339 US PCT

### OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
DR		DENIS POMPON ET AL., Methods in Enzymol., vol. 272:51-64, 1996, Yeast expression of animal and plant P450s in Optimized redox environments	
		NATIONAL CENTER FOR BIOTECHNOLOGY INFORMATION GENERAL IDENTIFIER NO. 984798, 09-14-1995, R. S. SIKORSKI ET AL., A system of shuttle vectors and yeast host strains designed for efficient manipulation of DNA in Saccharomyces cerevisiae	
		ROBERT S. SIKORSKI ET AL., Genetics, vol. 122:19-27, 1989, A system of shuttle vectors and yeast host strains designed for efficient manipulation of DNA in Saccharomyces cerevisiae	
		SHAO-BING HUA ET AL., Plasmid, vol. 38:91-96, 1997, Minimum length of sequence homology required for in vivo cloning by homologous recombination in yeast	
		J. GEIGERT ET AL., Tetrahedron, vol. 29:2703-2706, 1973, Two phytoalexins from sugarbeet (beta vulgaris) leaves	
		DESMOND G. HIGGINS ET AL., Cabios Comm, vol. 5(2):151-153, 1989, Fast and sensitive multiple sequence alignments on a microcomputer	
		MARK H. HARPSTER ET AL., Mol. Gen. Genet., vol. 212:182-190, 1988, Relative strengths of the 35S califlower mosaic virus, 1',2', and nopaline synthase promoters in transformed tobacco sugarbeet and oilseed rape callus tissue	
		A. DEPICKER ET AL., J. Mol. & Appl. Genet., vol. 1(6):561-573, 1982, Nopaline synthase: Transcript mapping and DNA sequence	
		PETER HAJDUKIEWICZ ET AL., Plant Mol. Biol., vol. 25:989-994, 1994, The small, versatile pPZP family of Agrobacterium binary vectors for plant transformation	
		R. DEBLAERE ET AL., Methods in Enzymol., vol. 153:277-292, 1987, Vectors for Cloning in Plant Cells	
DR		PAULINE A. BARIOLA ET AL., Plant Phys., vol. 119:331-342, 1999, Regulation of S-like ribonuclease levels in arabidopsis. Antisense inhibition of RNS1 or RNS2 elevates Anthocyanin accumulation	
		G. MURRAY BALANCE ET AL., Plant Phys., vol. 107:1027-1028, 1995, Medicago sativa cDNAs encoding chalcone reductase	
DR		T. M. KLEIN ET AL., Nature, vol. 327:70-73, 1987, High-velocity microprojectiles for delivering nucleic acids into living cells	

Examiner Signature		Date Considered	5/24/03
--------------------	--	-----------------	---------

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Please type a plus sign (+) inside this box →

+

JAN 08 2002

PTO/SB/08B(08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 5 of 5

Complete if Known

Application Number 09/857,581  
Filing Date June 5, 2001  
First Named Inventor Gary M. Trader et al.  
Group Art Unit Unknown  
Examiner Name Unknown  
Attorney Docket Number BB1339 US PCT

### OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
DR		WESLEY BRUCE ET AL., Plant Cell, vol. 12:65-79, 2000, Expression Profiling of the Maize Flavonoid Pathway Genes Controlled by Estradiol-Inducible Transcription Factors CRC and P	
DR		DESMOND MASCARENHAS ET AL., Plant Mol. Biol., vol. 15:913-920, 1990, Intron-mediated enhancement of heterologous gene expression in maize	
DR		LOC PHI-VAN ET AL., EMBO J., vol. 7(3):655-664, 1988, The matrix attachment regions of the chicken lysozyme gene co-map with the boundaries of the chromatin domain	
DR		M. DE BLOCK ET AL., EMBO J., vol. 6(9):2513-2518, 1987, Engineering herbicide resistance in plants by expression of a detoxifying enzyme	

Examiner  
Signature

*[Signature]*

Date  
Considered

5/24/03

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.